

Proposed Project

Upper Little Patuxent Watershed

Project Number: BF2

Subwatershed: Little Patuxent 3

Project Type: Reforestation

Project Size: 4.42 acres

Project Location: At the end of Congressional Court.

Project Description: There is a large open field at the end of Congressional Court within the David W. Force Park boundary. This open area lies between two stream channels and lies just south of the Upper Little Patuxent River. The area was replanted in 2003 but would benefit from additional planting. Field verification by Howard County Recreation and Parks determined that approximately 300 trees should be planted. The attached cost detail sheet is based on this estimate.

Use of volunteer assistance for site preparation, planting and necessary maintenance and monitoring of the site could help reduce overall project cost.



Project Benefits:

Stabilization	Additional trees and shrubs will help stabilize the stream bank along the west channel where there buffer has been greatly reduced.
Habitat	Additional forested areas will provide general air quality benefits and wildlife habitat.
Water Quality	An established buffer will provide shading effects to reduce water temperature and will trap runoff and pollutants such as fertilizers from the adjacent properties.

Project Constraints:

Environmental	No environmental/permitting constraints are present.
Property Ownership	This project lies within County owned property (David Force Stream Valley Park) and is primarily in an existing Howard County Recreation and Parks forest conservation easement.
Facility Access	Access from Congressional Court at the end of the cul-de-sac will require private property owner coordination and approval. Alternate access routes through the Park should be investigated.
Design / Construction	No major design or construction constraints are present. The design should incorporate native vegetation and a marked no-mow zone for understory development. The planning and design should be conducted in coordination with the Park and be in line with their goals and land management objectives.

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Cost Detail:

ITEM	QTY	UNITS	UNIT COST	TOTAL (Volunteer Labor)	TOTAL (Without Volunteer Labor)
Riparian Buffer Replacement					
Plant Material (trees)	4.42	AC	\$746.36	\$3,299	\$3,299
Plant Material (shrubs)	4.42	AC	\$0.00	\$0	\$0
Mulch, Tree Shelter	300	PLANTS	\$6.00	\$1,799	\$1,799
Cost to Plant	300	PLANTS	\$6.00	\$0	\$1,799
Site Preparation (volunteer)		AC	\$0.00	\$0	\$0
Basic Site Maintenance and Monitoring (volunteer)		AC	\$0.00	\$0	\$0
Direct Construction Subtotal				\$5,098	\$6,898
Base Construction Cost				\$5,098	\$6,898
Mobilization (10% of Directs or \$1,000)				\$0	\$0
Subtotal				\$5,098	\$6,898
Contingency (30%)				\$1,529	\$2,069
Construction Subtotal				\$6,628	\$8,967
Env't'l Studies / Permitting (5% of Construction or \$1,000)				\$0	\$0
Landscape Design and Surveys (25% of Construction or \$5,000)				\$0	\$0
Total Capital Cost				\$6,628	\$8,967
Operations and Maintenance Costs					
Annual Maintenance	5	Percent		\$255	\$345
Discount Rate	5	Percent			
Expected Life	5	Years			
Net Present Value of Annual Costs				\$1,104	\$1,493
Life Cycle Cost				\$7,800	\$10,500

Cost Notes and Assumptions:

Project costs were derived for both volunteer and paid labor. In calculating costs for volunteer labor it is assumed that local volunteer organizations could accomplish the project with County assistance and oversight. Site preparation, planting and any necessary maintenance and monitoring would be conducted by volunteers.

Size and species of trees and shrub plant material is based on approved Howard County Recreation and Parks information and is typically a 3-4 foot plant. Use of more mature or more immature plant material would affect the planting density and cost per plant.

Cost of plant material is based on 2009 survey of local and regional wholesale native plant nurseries. Plant material (seedlings) may also be obtained from the Maryland Department of Natural Resources, State Forest Tree Nursery at a much reduced cost or through Howard County's Stream ReLeaf program at no cost.